

Remarks

Further and favorable reconsideration is respectfully requested in view of the foregoing amendments and following remarks.

Thus, claim 2 has been amended to change “gum” to --rubber-- as suggested by the Examiner, thus rendering the rejection of this claim under 35 U.S.C. §112 moot.

The substitute specification filed with the Preliminary Amendment on September 8, 2005 has been amended to correct grammatical errors.

The patentability of the presently claimed invention over the disclosure of the reference relied upon by the Examiner in rejecting the claims will be apparent upon consideration of the following remarks.

Thus, the rejection of claims 1-3 under 35 U.S.C. §103(a) as being unpatentable over Higo et al. (USP 5,866,157) is respectfully traversed.

(1) The present invention relates to a patch containing tulobuterol prepared by laminating an adhesive layer consisting of a rubber, an adhesive resin and a plasticizer on a backing, wherein 1 to 4 w/w% of tulobuterol as an active ingredient and 0.1 to 3 w/w% of a higher fatty acid (such as a C₁₁₋₂₂ fatty acid in claim 3) **as a drug release controlling agent** are contained in the adhesive layer.

The object of the present invention is to provide a patch in which tulobuterol is contained in a lower concentration, but the patch has controllability of a **stable drug-release**. (Please see page 1, line 10 to page 3, line 15 of the substitute specification.)

(2) US Patent 5,866,157 (Higo et al.) discloses a matrix type patch formulation which comprises an adhesive layer containing a physiological active substance (0.1-20% w/w), an organic acid including its water-soluble salt (0.01-15%), a hydrophobic high molecular material (15-60%), a tackifying resin (10- 70%), a plasticizer (10-60%) and an absorption enhancer (0.01-20%). (See column 2, lines 40-52.)

The object of Higo et al.’s invention is to provide a matrix type patch formulation which increases percutaneous absorbability of the physiological active substance and is extremely reduced in irritation to skin where the formulation is applied. (See column 2, lines 24-29.) The reference describes that the inventors “--- found that the percutaneous

permeable property of drug is significantly improved --- by formulating a physiological active substance, an organic acid and an absorption enhancer into an adhesive layer---. (See column 2, lines 32-39.)

As explained above, Higo et al.'s invention is characterized by increasing percutaneous permeability of a physiological active substance such as tulobuterol by formulating **an organic acid and an absorption enhancer** into the adhesive layer, i.e. the object of the reference invention is attained by using **a combination of an organic acid and an absorption enhancer**.

As shown in Comparative Examples 1-13 in Higo et al., the objective and desired effect of the reference is not attained by using **either** an organic acid such as sodium propionate (C. Ex. 7, 11, 13), sodium acetate (C. Ex. 8, 10, 12) and sodium salicylate (C. Ex. 9) **or** an absorption enhancer such as pirotiodecane (C. Ex. 1, 2, 3), 1-menthol (C. Ex. 4, 5) and lauryl alcohol (C. Ex. 6) **alone**. Namely, to use either one alone is clearly excluded from Higo et al.'s invention. A higher fatty acid such as C₁₁₋₂₀ fatty acid is illustrated as one of various absorption enhancers of a physiological active substance therein, but such acid is not used singly or in a combination of the organic acid or its salt in any working examples thereof.

(3) As mentioned above, the present invention is clearly different from Higo et al. in both the problem to be solved and the means for solving the problem.

There is absolutely no suggestion in the Higo et al. reference which would lead one of ordinary skill in the art to use a higher fatty acid such as a C₁₁₋₂₂ fatty acid **alone**, instead of **a combination of an organic acid and absorption enhancer** as described in the reference. Nor is there any suggestion in the reference that doing so would result in a patch containing tulobuterol in a lower concentration having stable release controllability. That is, one skilled in the art would not be motivated to use such a fatty acid with the expectation of obtaining an improved patch containing tulobuterol.

For these reasons, Applicants take the position that the presently claimed invention is clearly patentable over the Higo et al. reference.

Therefore, in view of the foregoing amendments and remarks, it is submitted that each of the grounds of rejection set forth by the Examiner has been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

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